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ABSTRACT

The report focuses attention on those areas of medical school education that may have a negative effect on women students' confidence and competence. It examines the different ways that male and female medical students experience their training and the particular stresses that women may face, including: role conflicts; questions about commitment; balancing career and personal needs; parental and childbearing leave; and sexual harassment and discrimination. Several model programs are highlighted that address women's concerns at various levels of medical training, and a set of recommendations are provided for medical school and teaching hospital administrators, most of which are based on strategies that have been implemented successfully at institutions around the country. Suggestions include ideas for encouraging more women to enter medicine and to improve outreach and retention. A selected list of organizations and additional resources is also included. Contains 42 references. (GLR)

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PROJECT ON THE STATUS AND EDUCATION OF WOMEN

ASSOCIATION of AMERICAN COLLEGES

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Rx FOR SUCCESS

IMPROVING THE CLIMATE FOR WOMEN IN MEDICAL SCHOOLS AND TEACHING HOSPITALS

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Julie Kuhn Ehrhart
with Bernice R. Sandler

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Introduction

In the last ten years, women have had unparalleled success in gaining entry to, and graduating from, U.S. medical schools. They now constitute 35.2 percent of medical school students nationwide.[1] (Individual schools vary in the enrollment of women from 17 percent of their students at the University of Utah, to 55 percent at the Medical College of Pennsylvania.)[2] Nearly one-third (32.8 percent) of graduates from medical school were women in 1987–88.[3] As a result of women's interest and increased opportunity to attend medical school, administrators have had the enormous task of adapting to this influx of nontraditional students. Medical education has been challenged in many instances to adapt traditional ways of doing things, and, at the same time, to adopt new policies and programs to ensure a gender-fair environment for all students.

Much progress has already been made in accepting women in medical training. Many schools have women's information and support networks such as student groups, faculty committees, and the like. This report hopes to increase awareness of the many positive changes that exist as a result of administrators' and faculty members' efforts to make medical school a more welcoming and comfortable environment for women.

This report also focuses attention on those areas of medical school education that may have a negative effect on women students' confidence and competence. While all medical students experience stress, this paper will examine in particular the stress that women students may feel at times. For example, women students may feel more pressure about their choices—among specialties, career paths, and personal and professional demands—and more pressure in their relationships with peers, co-workers, and professors.

Some of these are pressures women in all professional fields experience; some are specific to medicine. Some of the pressures are external; some are internal. Some are inherent to medical students; some are not.

By examining the sources and the apparent results of these

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perceived and real pressures, medical school personnel can help to alleviate them. This report therefore provides an extensive list of recommendations that enable medical school and teaching hospital administrators to respond to these various problems and provide support for their women students, staff members, and faculty members. The report includes suggestions for encouraging more women to enter medicine and recommendations to improve outreach and retention strategies. A selected list of organizations and additional resources also is included.

Sources of information for this report included empirical studies of medical students and residents and reports and surveys by individual researchers, women's groups, individual medical schools, and medical organizations. These sources are listed in the endnotes as well as in a list of resources at the end of the report. Interviews with medical school personnel and faculty members, a "call for information," and meetings with advisory committees provided additional information.

Choosing to be a Physician

Programs designed to attract, retain, and encourage women in medical school do not work in a vacuum. To be effective, they must build on, and in some cases, counteract the experiences of women before they enter medical school. Some of the factors crucial to the development of nontraditional goals and realistic life and career expectations in girls are discussed below.

■ **Socialization and sex-role stereotyping.** Early childhood socialization—reinforced not only by parents and teachers, but also by the media—teaches children roles, attitudes, and behaviors thought to be appropriate for each sex. For example, despite the best efforts of many parents and teachers, children are still exposed to a wide array of "sex-appropriate" toys: building blocks, chemistry sets, and trucks for boys; dolls, kitchens, sewing kits, clothing, and cosmetics for girls.

That children stereotype occupations by sex is apparent very early in childhood. One study found that by age five, boys and girls have developed sex-stereotyped notions of occupations and activities; furthermore, when asked about their own career plans, 83 percent of the girls and 97 percent of the boys (grades K-6) chose traditionally feminine and masculine occupations, respectively.[4] A more recent study found that when they were asked to "draw a picture of a scientist" only 28 students among 4,807 in kindergarten through grade five drew a woman scientist. The twenty-eight drawings of female scientists all were done by female students.[5] (It will be interesting to see, in the next several years, if children's concepts of sex-appropriate careers are mitigated by the recent influx of women into medicine and science, especially in family practice and pediatric specialties.)

Parents' expectations that their children will follow traditional sex roles can steer girls away from certain areas; in contrast, encouragement from parents to succeed in science and math is crucial to a girl's decision to take these courses in high school.[6] Whether students enroll in science and math courses in high school also is closely related to their perceptions of those subjects' relevance to their current and future lives and to their estimation of their ability to succeed in the courses.[7] There is a strong correlation between the ways in which high school girls expect to allocate their time between employment and family responsibilities and the type of occupation they plan to pursue. Girls who show a stronger commitment to join the labor force rather than to stay at home are more likely to choose male-dominated careers.[8]

■ **Preparation and achievement.** While a background in science never has been a prerequisite to attend medical school, and although the Association of American Medical Colleges has increased its emphasis on the importance of a broad liberal education for future medical students, a core of science knowledge is basic to the study of medicine.[9] Science and mathematics education in elementary through postsecondary education often underserves girls and women: girls' desire to participate in science activities diminishes as they progress through school, as does their achievement and the number of their actual experiences in science.[10] Their lower interest and achievement can be attributed, in part, to the fact that girls may receive less encouragement and be actively or subtly steered away from science experiences such as going on field trips and working with instruments and laboratory equipment.[11] Subsequently, girls in high school are less likely to take a full college-preparatory series of science and mathematics courses, thus limiting the possibility that they will pursue science-related careers including medicine.[12]

As a result of this lack of preparation and limited vocational guidance at all educational levels, some women—especially older reentry women—find that they must take college-level science courses before they can apply to medical school: a time-consuming, expensive, and often deterring process. Nancy G. Kutner and Donna R. Brogan have found that women students were more likely than men students to have entered medical school after changing their occupational plans following actual employment, including working as a wife and mother.[13] Women's decisions to enter medical school later often means they need additional pre-medical training. Thus, it is critical that girls and women receive early career counseling as well as the encouragement and opportunity to study and excel in science so as not to limit or compromise their future career options.

■ **Peer pressure.** High school girls interested in traditionally male fields may be subject to great pressure to rethink their choices. They may be viewed as nonconformists, as "grinds," or as "tomboys" at a developmental period when conformity

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is highly valued. Fear of rejection by their peers may lead some young women to lower their career aspirations and even to abandon interests in advanced math and science. At a time when social interests prevail, girls do not want to compete with boys; they want to be liked by them. Despite the fact that girls and boys do equally well in computer classes, for example, even the brightest girls often do not join after-school computer clubs.[14]

■ **Role models.** The chance for young women to see someone of their own sex engaged in work they had considered only appropriate for men is crucial to their development of non-traditional aspirations and goals. Role models such as teachers, parents, community members, or famous persons can have a strong influence–positive or negative–on girls' academic and career choices. It is crucial that girls and young women be exposed to a variety of role models, especially those who are combining a demanding career with raising a family or who have other conflicting commitments.

In summary, young women's academic and career decisions are influenced by a variety of external and internal–and conflicting–messages about which career paths are realistic, which are possible, and which are "appropriate." These early socialization processes affect women's assumptions and expectations about their own abilities and goals throughout their college years, and for those women interested in medical careers, may be an important factor in their adjustment to and success in medical school.

The Demands of Medical School

The medical school experience places great demands on students. The process of becoming a physician has been criticized by some as a dehumanizing, psychologically stressful experience, often detrimental both to students and to their interpersonal relationships, including the patient-physician relationship.[15]

The medical school process equips students with biomedical knowledge and clinical skills and serves as an introduction to the life-long learning required of physicians. Medical school also begins the process of socialization into the profession of medicine. One of the most important transitions for students at this time is learning to identify themselves with and as physicians: "learning to think like a physician." Recent research suggests that this socialization process poses special challenges for women.

One study asked first-year medical students to complete a personality research form twice; once for themselves and once as they thought a member of the following groups would answer: most physicians, most male physicians, and most female physicians.[16] In this study, men and women students had similar personality traits; nevertheless there were marked differences in their characterization of "most," "male," and "female" physicians. Male students saw "most physicians" (sex not specified) as similar to male physicians, and conceived of female physicians as different. Female physicians were seen to fit closely with the traditional stereotypes of women: less aggressive, less autonomous, less dominant, less persistent, and more likely to avoid harm, be nurturant, and be orderly.

The women medical students saw greater differences among the categories than did men students. Their perceptions of the traits of "most physicians" were evenly divided between traits of female and male physicians. The female students' attribution of less stereotypic characteristics to physician groups suggests that they are more aware of, and responsive to, sex-typed attitudes about professional identity than are their male peers.

Another finding showed that women students described more significant differences than men students did between ratings of self and ratings of most physicians. The authors point out that these disparities are critical areas of potential conflict and stress. The women students' perceptions of male physicians as markedly more aggressive, more autonomous, more dominant, and more desiring of social recognition for their achievements–and less affiliative and understanding–could lead to interpersonal problems between the women students and their male physician professors and supervisors. The women students' more positive expectations of female physicians might suggest the need for more contact with female role models early in their training.

Further research needs to be done on the effects of the medical school environment on students' perceptions of themselves and their professors and on their socialization into the profession. One study of professional and sociopolitical attitudes of female and male first- and third-year medical students and recent graduates showed that, although there were some gender-based differences in attitudes, the differences were not substantial.[17] Women students tended to value establishing a good interpersonal relationship with the patient, attending to the impact of disease on the patient and her/his family, and preventing disease and promoting health more than men students. The differences decreased among more advanced students. The authors conclude that there is some evidence that medical education "homogenizes" men's and women's attitudes, but they also point out that their study and others were conducted when women were still a significant minority in medical school. The authors conclude, "As more and more women are recruited, the internal dynamics are likely to change. As a result, women may find themselves in a better position to assert their particular attitudes and interests."[18]

Special Pressures on Women

In a study of the gender climate in medical school, Linda Grant has examined the extent to which the medical school environment may be inhospitable to women.[19] She distinguishes among blatant, subtle, and covert discrimination and surveys both women and men students about the prevalence of each.[20] Overt sexist remarks are examples of blatant sexism. Subtle sexism refers to the unequal treatment of women that is visible but often is not noticed because it is internalized as "normal," "natural," or "customary." Grant cites the systematic channeling of women toward some medical specialties and away from others as an example of subtle sexism. Covert sexism is woven into the fabric of everyday life. In male-dominated professions like medicine, covert sexism is often inherent in the way the system works, as if the white, middle-class male is the norm, and any structural or ideological changes not based on his needs or wants are aberrant. Medical students live in an environment that operates with what Jane Leserman terms a "men's club atmosphere," where the "clockwork" of typical careers better fits men than women.[21] In support of these notions, Grant cites the general lack of support within medical education for maternity leave, child care, and the need for more flexible schedules to accommodate women with domestic responsibilities.

Admissions Interviews

In Grant's study, fewer than 15 percent of the women perceived covert—or institutionally based—sexism in medical school.[22] One area in which the women experienced or suspected that they had experienced discrimination, however, was in admissions or financial aid interviews. The women students viewed the selection criteria as emphasizing typically masculine life-styles and achievements. They believed that in admissions interviews they had been grilled more intensely about personal life and marriage and family plans than men applicants. A larger proportion of men than women felt that men had been disadvantaged in admissions because of affirmative action policies.

First-year medical students at the Medical College of Ohio completed a survey on their experience with admissions interviews. Women were asked three times more often than men about plans regarding marriage and children although such questions may be illegal in many instances. Men were questioned one and a half times more often about their anticipated medical specialty and why they chose to become physicians. Even though they generally did answer directly, women were more fearful of completely answering personal inquiries. Investigators J. Marquat, K. Franco, and B. Carroll conclude that subtle gender bias continues among medical school interviewers.[23]

In 1988 the Association of American Medical Colleges added an item to their Medical Student Graduation Questionnaire on whether residency programs asked for various information during interviews. Women students more frequently than men reported questions about the stability of personal relationships (25 versus 17 percent) and intention to have children (40 versus 16 percent).[24]

It is not illegal for an interviewer to ask questions based on sex, but the questions must be asked of both sexes. Choosing students on the basis of answers to such questions, however, violates Title IX of the Education Amendments of 1972.[25]

Finances

Researchers in one study of medical students and residents found a correlation between gender and financial status. Women students reported a higher incidence of financial struggle both personally and in their families while growing up.[26] The authors, Marijo B. Tamburrino and others, believe that financial difficulty is an underrated stress factor for women medical students. While men also face financial strain as they begin medical school, they are more likely to experience medical training as insurance of future financial success.[27]

The costs of attending medical school have risen steeply in the 1970s and 1980s. The median annual tuition at a private medical school is estimated to be $16,965 in 1989–90; at a public medical school, $5,463 for state residents and $11,848 for nonresidents.[28] In the ten-year period from 1977 to 1987, available scholarship money grew from $79 million to $145 million, but its proportional contribution to student financial assistance declined from 38 percent to 23 percent.[29] Loans constituted the major portion of the $642.4 million in student financial assistance awarded in 1987–88. Among the class of 1988, 83 percent of the students incurred some debt to finance their medical education. These debts averaged $38,489 per student, although they reached more than $100,000 for some students. Underrepresented minority medical graduates particularly have been affected by the increased costs of medical education. For example, in 1988 nearly 37 percent of this group had debts over $50,000 compared with 24 percent of all medical school graduates.[30]

In the study by Tamburrino et al. mentioned above, 79 percent of the female medical students felt that they were struggling financially, while only 58 percent of their male peers reported similar concerns. Additionally, 50 percent of this same group of women reported that their families had struggled with finances as opposed to only 35 percent of the men. The authors hypothesize that instead of actual financial instability in her family, a female medical student may face more financial resistance from her family to her plans: "A

mother may perceive her daughter's choice of medicine as a rejection of her own lifestyle and values or she may believe that medicine is too stressful.... Both parents may worry that their daughter will be unable to combine her career with marriage and motherhood. They may expect that she will quit medical school or never complete a residency.... All of these factors could lead to the parents' conclusion that paying for their daughter's medical education is not a sound investment."[11]

Women students and residents report more financial struggles. One explanation might be that more male students are married and have wives who are able to contribute to the family budget. Another reason might be that women in general have greater difficulty in obtaining loans (including the larger loans required for medical education) from private lending institutions.[12]

Role Conflict

Despite starting medical school with comparable levels of basic personality resiliency, psychiatric health, and life satisfaction, by the middle of their first year, female medical students report a greater increase in interpersonal sensitivity, depression, and anxiety and a greater decrease in life satisfaction than do their male colleagues.[13] Women students also report more role conflict and less support from their families, and greater stress from loneliness and lack of time to interact with significant others.[14]

In a study of developmental strains in women medical students, Kathryn B. Kris, a psychiatrist in the Harvard University Medical Area Mental Health Service, found that women medical students, like women students in other fields, consult with the mental health service more frequently than do their male peers.[15] Typical problems include fear of loss of relationships with families and partners, financial strain, coping with illness, and public competition with men. Kris says, "Although some men have similar conflicts, women report these conflicts more frequently. The expectation that they must choose between their identities as professionals or as women is experienced as a loss and may be a symptom of difficulty."[16]

Clinical Experiences

At some point in their medical school training, most frequently in the third and fourth years, students begin their clinical experience with courses in which they must take patients' medical histories and conduct physical examinations; thus they begin to deal directly with patients. Some aspects of clinical training may be experienced differently by men and women students. For example, learning to examine a patient, in which students traditionally practice on each other, can produce additional—and sometimes unexpected—stress for women students as they cope with feelings of modesty about exposing their bodies to classmates.

Interpersonal Relations

Among the many sources of stress for medical school students are their conflicts with those with whom they work and train, especially during the clinical years. A set of two studies examined the effects of interpersonal conflicts with faculty members, residents, peers, and nurses on students' morale and levels of academic effort.[17] The researchers found that women students experience a substantially stronger relationship between satisfaction with clinical training and level of interpersonal stress than do men students. When interactions with authorities and nonauthorities were examined separately, satisfaction with clinical training for both men and women related more strongly to stress from conflicts with authorities (residents and faculty members), thus suggesting that students reacted more negatively to those conflicts than they did to conflicts with nurses and peers. Women reported higher levels of stress, however, resulting from interactions with nonauthorities due to a higher incidence of conflicts between women students and nurses. Women, but not men, reported increasing the effort they expended on their studies following stressful interactions with authorities. Levels of effort were not significantly related to conflicts with nonauthorities for women or men. The authors conclude that women are more bothered than men by conflicts with medical school authorities and that, unlike men, they tend to react by increasing their efforts to succeed.

A more general study of the gender climate in medical school by Linda Grant found that of 270 graduates of a large Midwestern medical school, 34 percent of the women said they had personally experienced gender discrimination.[18] Sixty-two percent had observed gender discrimination toward classmates. Women students reported more discrimination in clinical rotations than in classroom work, a pattern consistent with studies that suggest that sex discrimination becomes more intense as students move closer to the practice of a profession and spend more time with practicing professionals than with full-time faculty members.[19]

One of the integral components of the gender climate in medical school is the interaction of women and men students. Men's awareness of gender discrimination in medical school and their attitudes toward women classmates are crucial in creating either a supportive atmosphere or another source of resistance for women.

Few studies have been done at medical schools to assess the

climate for women students. In those studies that have been done, researchers have found a wide range of reported sexist behavior and discrimination from male peers. For example, in a study of five successive graduating classes in the early 1980s from a major Midwestern medical school, researcher Grant found that women "only rarely encountered sexism from their peers."[40] A study of ten medical schools, however, described harassment and discrimination from peers as a "problem": 45.7 percent of the women students in the survey had experienced it at least once, with 26.8 percent of these experiencing it three or more times.[41] A 1987 survey of female medical students, residents, and staff members of the University of Wisconsin Hospital and Clinics reported that 46 percent of the respondents had experienced sexual harassment from a classmate or peer.[42]

Minority Women

Minority women students–American Indians, Asian-Americans, Blacks, and Hispanics–often face "double discrimination" because of their sex and because of their race. Whites–both male and female–can be uncomfortable dealing with minority women and act on a variety of mistaken assumptions about minorities' backgrounds, competence, commitment, and areas of interest.[43]

Like women students who often feel more comfortable with women faculty members, minority students are often more comfortable with minority faculty members.[44] Given the lack of women faculty members or minority faculty members of either sex (minority medical faculty account for 2.9 percent of faculty at all medical schools[45]), minority women often feel severely isolated with few or no people available to serve as role models, mentors, or peers. Minority women are more likely to be excluded from informal and social interactions–sometimes by white women as well as by men.

Minority students more often plan to relocate to a socio-economically deprived area than do white students. For example, 55 percent of the 1987 Black female and male graduates intended to work in deprived areas, compared to 17 percent of white women and 10 percent of white men who planned to do so.[46] A study of female and male graduates of Howard University College of Medicine, 94 percent of whom were Black, shows that a higher percentage of female than male physicians practice in large cities, provide primary care, and serve younger and poorer patients.[47] Vivian Pinn-Wiggins, president of the National Medical Association, states that although there is a need for minority students to practice in primary care fields and return to their respective communities, a broader range of fields must be open to them. "Consideration should also be given to the need for minorities to enter other specialty fields...not only for the sake of minority patient populations, with their varied health care problems, but also so that there can be a greater representation of minorities on medical school faculties, where they can serve as role models in academic medicine," she says. Pinn-Wiggins states, "Minorities are needed in all aspects of medical and health care, including academic medicine, clinical research, and laboratory medicine."[48]

Sexual Harassment

Sexual harassment is unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct. These actions constitute harassment when:

- submission to the conduct is either explicitly or implicitly a term or condition of an individual's employment or learning experience
- submission to or rejection of such conduct by an individual is used as the basis for employment, academic, or clinical decisions affecting that individual
- such conduct has the purpose or effect of unreasonably interfering with an individual's work, academic, or clinical experience; or creating an intimidating, hostile, or offensive work, academic, or clinical environment.

Sexual harassment is an issue that only recently is getting public attention although the problem itself is not a new one. Despite the fact that many medical schools have policies prohibiting harassment, it is an-all-too common occurrence for many women students, residents, and faculty members.

Many women still experience some form of sexually harassing behaviors from medical faculty members and staff members as well as from male students and patients. Reported harassments include leering, sexual innuendos and comments, obscene gestures, humor and jokes about sex or women in general, unwanted touching or other physical contact, and direct or indirect threats or bribes for unwanted sexual activity. Because those in power perceive minority women to be lacking in status and power, these women may be especially vulnerable to sexual harassment.[49]

Although the data concerning frequency of sexual harassment in medical school are limited, most studies concerning women in graduate schools report that incidents occur involving between 30 to 40 percent of the females studied. In one study at the University of Wisconsin School of Medicine, 33 percent of the women responding to a survey reported that they had experienced sexual harassment from a person in a position of authority. An even larger number, 46 percent, reported that they had experienced sexual harassment from a peer. Actual examples of harassment follow[50]:

- A male resident dates or wants to date a female medical student and gives her less "scut" work than other students, thus making others resent her; or after breaking up with her,

he goes out of his way to make her life more difficult.

- A professor shows off-color slides during an anatomy lecture.
- The chief of staff praises the women students for their looks but asks the men to present the cases.
- While examining an unconscious female patient, a male physician makes a crude comment about the patient's sexuality, pats a female student on the backside and tells her he thinks she would do a better job sexually.

A recent study by Leah Dickstein and Allison Batchelor of 1,120 female residents shows that almost a quarter of respondents complained about sexual come-ons by patients. Almost one in five complained of sexual harassment by their attending physicians, and almost one in ten complained of harassment by their peers.[51] In a study of students at ten medical schools by DeWitt C. Baldwin, Jr. and colleagues, 28.9 percent of the women respondents experienced sexual advances, 61.5 percent experienced sexist slurs, and 25.7 percent complained of sexist teaching materials.[52] Sexist slurs ranged from being called "honey," "sweetie," or "dollface" to statements that women are less capable than men or do not belong in a particular field.

Women were most likely to experience sexual harassment or discrimination from clinical faculty members: 65.6 percent experienced it at least once; nearly a third of these respondents had experienced it three or more times. Additionally, 62.2 percent of women named residents as the second most frequent source of at least one experience of sexual harassment or discrimination; approximately 37 percent stated that they had experienced sexual harassment or discrimination from residents and interns three or more times.[53] Some persons believe that because medical students are adults, sexual relationships between staff members and students are a private matter concerning "consenting adults." What makes sexual harassment different from "ordinary flirting," however, is that there is a power differential between the parties. The student relies on professors, clinical supervisors, and residents for grades, recommendations, and so forth. A woman who is harassed cannot easily say no because of the power of the professor or supervisor. A number of colleges and universities have policies frowning upon consensual sexual relationships between students and faculty members."[54] These policies typically point out the conflict of interest in evaluating a person with whom one is having an "amorous" relationship.

Unwanted pressure for sexual activity makes many women feel uncomfortable, angry, and helpless, in part because they cannot easily object or otherwise show their feelings when the harasser is someone in a position of power. It also may make women feel like outsiders—their sexuality becomes more important than their intellectual ability and medical skills. Moreover, sexual harassment can damage a woman's self-esteem and her growth as a person who feels herself equal to men and able to work with them. The tension it creates also can distract a woman from the tasks she has to perform and add to the high level of stress produced by being in medical school. A woman can spend a good deal of emotional energy trying to figure out what she ought to do, how to handle her anger, and in the case of more subtle behaviors, wondering whether she even has cause to be uncomfortable.

Students who are sexually harassed often are fearful of retaliation and do not report the behavior even though sexual harassment is illegal. (In the University of Wisconsin study, only 2 percent of those who had experienced sexual harassment reported the behavior.) Some women find it difficult to talk about because they blame themselves and because they are fearful that others will blame them. Of those who talk to someone in a position of authority, a very high percentage do not want to file charges; most cases, if reported at all, are handled informally. Occasionally, faculty members who have harassed students have been suspended, fired, or allowed to resign or retire.

Institutions that have policies prohibiting sexual harassment of students by faculty members may not have policies in place to deal with harassment of students by students. Sometimes schools with policies may not handle the issue well—neglecting to publicize the policy, ignoring student complaints, or condoning harassing behaviors—thus leaving themselves open to lawsuits from students.

While some sexual harassing behaviors are meant as "jokes" women are quick to point out that these jokes are typically demeaning to women. Some people counter that the "jokes" are part of the "hazing" that all medical students undergo. This interpretation is often, though not always, rejected by women. One woman from the University of Wisconsin study stated:

> All medical students are treated as [nuisances]. But in our case, the attitude is: you're not only an annoyance and stupid; you're also female.

Sexual harassment is prohibited by law under Title VII of the Civil Rights Act of 1964, which covers all employees, and by Title IX of the Education Amendments of 1972, which covers employers and students. In some instances, state laws may also apply.

Balancing Work and Family

A career in medicine requires heavy commitment and long hours, especially in the early years, and may coincide with the time a student plans for marriage and children. The inflexible time demands and on-call responsibilities of medicine make balancing work and family roles especially difficult for physi-

cians in training. Few students are lucky enough to encounter women physicians who are also wives and mothers who can serve as role models.

Studies of women physicians show that they, like other women employed outside the home, take care of most of the home and child-care responsibilities, although most practice nearly as many hours per week as men physicians who do little or no domestic work.[55] In Carol Weisman and Martha Teitelbaum's study of obstetricians and gynecologists beginning practice in the 1980s, men averaged 7.5 more weekly practice hours than women. When the kinds of practices men and women physicians were involved in and family structures were taken into account, however, differences in practice hours persisted only for women with small children.[56]

A 1987 study of women and men medical students' intended commitments to profession and family showed both men and women anticipating giving equal attention to each in the future.[57] These attitudes seemed to remain essentially unchanged throughout medical school. In measuring these students' behavioral intentions (that is, how many hours they expected to devote to family and career), the researchers found that, although all students anticipated giving more hours per week to professional roles, men anticipated significantly more hours devoted to their profession than did women. Women anticipated more hours devoted to their family than did men. As students continued their medical education, their intended hours of working increased and intended hours with family decreased. The researchers posit that medical socialization seems to increase the anticipated hours' commitment to the profession among both women and men, apparently at the expense of family time. Rather than forging new career patterns for physicians that allow for more time for family and personal life, they conclude, women in medicine seem to be adopting the normative work patterns of men in the profession.

The authors, Grant et al., see trouble ahead for young physicians of both sexes if their preferences for an equal balance of work and family persist beyond graduation—they may become increasingly frustrated with intrusions of professional roles into private life.[58] Medicine is a career that demands an extraordinarily high degree of commitment. Balancing work and family roles may be especially stressful for women physicians who seem to expect to carry heavier shares of family responsibilites than do their male peers but who also expect to carry an equally heavy professional workload.[59]

Judith Hammond, in the *Journal of the American Medical Women's Association*, argues that what needs to be changed is not women's desires to have both a fulfilling career and satisfying home life, but the structure of work and the definition of a successful medical career.[60] The limited number of acceptable career styles and models and the "male orientation" of work organization creates a significant barrier for women. Hammond argues that when researchers compare women with "mythic" men whose careers are unaffected by the relationship between work and family, social, and community life, the researchers end up supporting the idea that women are not successful if they do not measure up. Hammond says, "In addition, we end up supporting official notions that men *ought* to adopt this heroic model and devote the majority of their energies to professional work or risk feeling (and being defined by others as) unsuccessful, uncommitted, and unmasculine if they do not."[61] Hammond points out that institutional changes were needed—and indeed called for—before the increase of women entering medical school in the 1970s, and concludes with a call for reevaluating work organization and a better understanding of system changes that could be beneficial to men and women who choose a medical career.

Pregnancy and Parental Leave

Women medical students and residents who are interested in having children must make a decision as to the timing of their pregnancies and care of their children. Recent studies of pregnancy during medical training show that most women plan their pregnancies and elect to have children during their residencies.[62]

In a national survey of women physicians who had completed residency training and were less than fifty years of age, respondents' first pregnancies (77 percent of which were planned) occurred as follows: prior to medical school, 4 percent; during medical school, 7 percent; in first year as house officer, 11 percent; in other residency year, 32 percent; in fellowship year(s), 13 percent; in practice, 28 percent; on leave or other, 5 percent.[63] Only 33 percent of the 474 respondents reported that their training or work sites had maternity leave policies at the time of their first pregnancy. Sixty percent of the respondents with children took maternity leaves of six weeks or less.

Little support was reported from training programs or workplace directors, as only 16 percent of the respondents reported help from these sources during their pregnancies. When asked how many pregnant women physicians they had personally known before becoming pregnant, 39 percent of the respondents reported none. Many were pioneers at their institutions in negotiating their individual arrangements to accommodate pregnancy and early child care.[64]

In 1983 the ad hoc Committee on Women Physicians of the American Medical Association conducted a nationwide survey of 1,364 women physicians concerning pregnancy during residency.[65] The committee found that about two-thirds of the respondents had children. Almost half had had their first child during training, and a quarter had had a second child during training. Estimates are that of the 22,623 women who

were residents in 1987, at least 7,500 will become pregnant at least once before completing their programs.[66]

Given the increasing number of women in medical training and the fact that many of them will have children at some time during their training, medical schools and hospitals need to develop policies to ensure equitable treatment of pregnant women and their colleagues. Developing and publicizing a written maternity/parental leave policy not only will encourage pregnant residents to make timely work arrangements and schedules with program directors and colleagues, but it will help attract women residents to a program whose administrators are willing to be supportive and mindful of young physicians' other responsibilities.[67]

Child Care Provisions

Adequate child care is an issue of national concern for working parents. For medical students and residents, whose schedules are less flexible and whose options are fewer, inadequate child care can have both an immediate and long-term impact on their professional careers. Extended hours, rotating shifts, emergencies, and other special work conditions prevail for these women, and child care problems can be intensified. A recent study of 1,120 female residents showed that one in four had at least one child, and 10 percent had more than one child. Almost 80 percent of the children were under age six.[68]

A study of child care programs affiliated with teaching hospitals shows that the medical community is aware of these problems and is actively addressing them: of the seventy-one U.S. teaching hospitals responding to an American Medical Women's Association survey, over half (57 percent) had child care centers either in place or to be opened in late 1989.[69]

Status of Women in Academic Medicine

The employment patterns of men and women medical faculty members are very different. While men are distributed fairly evenly over the top three ranks, a high proportion of women faculty members occupy the rank of assistant professor.[70] Of women on medical school faculties in 1988, 9.4 percent were professors, 19.8 percent were associate professors, 49.2 percent were assistant professors, and 17.4 percent were instructors; the remaining 4.3 percent were other ranks or unknown. The relative proportions for men were as follows: 31.5 were professors, 25.8 were associate professors, 33.7 percent were assistant professors, 6.9 percent were instructors, and 2.2 percent were other ranks or unknown.[71]

Because most women continue to be employed at the assistant professor level, the number of likely women candidates for chairs and deanships has not kept pace with the pool of men candidates. In 1988–89, seventy-seven women chaired academic departments (of these at least nine are serving in an acting or interim capacity).[72] Yet this number represents only 3 percent of all chairs of academic departments.

In 1987 women constituted 18.9 percent of all full-time medical school faculty members.[73] Interestingly, the percentage of female medical school graduates who join the faculty of a U.S. medical school exceeds that of the men who join. Of medical school students who graduated in 1961, 10 percent of the men, but 14 percent of the women, were full-time faculty members in 1987.[74] As can be seen in the statistics above at each successive rank, the representation of women drops. Women are promoted more slowly than men: It often takes more than twenty years for a woman to become a full professor, while it takes men about twelve years.[75]

Janet Bickel of the Association of American Medical Colleges, in her December 1988 article in the *New England Journal of Medicine*, calls for new strategies to be designed so that deans and chairs of departments can increase the numbers of women who progress into leadership positions.[76] She suggests taking a critical look at current practices and policies to determine what is working and what is not. Recently, some institutions (for example, University of California System and University of Miami) have adopted more flexible policies such as "stop-the-clock" programs that allow parents who are raising children to add a year to the tenure clock. (See the model programs section.) These kinds of programs need not be reserved for child-bearing and child-rearing, but could also be helpful to employees who must take care of sick relatives or who need medical leave themselves. Another innovation would be part-time work options in research training programs.

A current debate in the medical community, as well as elsewhere in academe, is about the necessity and appropriateness of measuring faculty members largely by their publishing records. In March 1988, the dean of the Harvard Medical School issued new guidelines for hiring and promotion. Among them was the recommendation that the number of publications to be reviewed at the time of a faculty appointment or promotion be limited to five papers for an appointment as an assistant professor, seven for an associate professor and ten for a professor. If it were widely followed, such a practice might relieve the pressure to publish large quantities of articles.[77]

There are ways to adapt the structure of medical training and academic medicine and, with a minimum of disruption, improve the procedures and programs that would increase the opportunities for women's advancement within academic ranks. It seems that many of these strategies would benefit men as well and enable both women and men to work more comfortably, given the changing sex roles and new social and economic realities of American society.

Seeking and Being a Role Model

The current lack of senior women physicians impacts strongly on women medical students, residents, and junior faculty members who are robbed of potential role models and mentors. This is especially true in specialties that are still considered nontraditional for women, such as surgery.

Female faculty members show a greater willingness to become mentors for both women and men students than do male faculty members. In a study of a research-oriented institution (not a medical school) where women made up 7 percent of the faculty, they were identified as mentors by 21 percent of the men graduate students and 37 percent of the women graduate students.[78] For women students, the presence of women faculty members heightened morale and increased success. Faculty women were also mentors for support staff members, treating this predominantly female group in a less stereotypic fashion and raising their morale. The implications for the medical school and teaching hospital settings are obvious: an increased presence of women physician faculty members can improve the morale of hospital and nursing staff members and change traditional, hierarchical ways of working together and making decisions.

It has been suggested that women's medical careers suffer from their unequal access to mentors of either sex.[79] The literature includes a good deal of research on the mentor system in medicine and how it works for women.[80] One study surveyed women physicians to compare the experiences of those who had male mentors with those who had female mentors. The study showed that high-ranking male mentors, the most effective career sponsors, also are the least likely to provide personal advice. They are least likely to encourage their protégées' equality and less sensitive to sex discrimination issues. High-ranking female mentors offer as much sponsorship as their male counterparts; they are, however, very few in number in medicine. "Some protégées may be able to seek out high-ranking women mentors, but perhaps only at the cost of working with someone whose interests are not quite similar to their own, and perhaps someone overburdened with similar requests from other would-be protégées," conclude the authors.[81]

In a recent paper, Dalia G. Ducker points out that while male colleagues in medicine, through overt and covert actions, may exclude women from informal networks, women often exclude themselves.[82] Because medicine has long been considered a man's career, the expected characteristics of its members are those of the dominant group. Thus physicians are expected to be assertive, independent, achievement oriented, rational, and objective: characteristics not expected from women and not traditionally thought of as feminine.[83] Ducker emphasizes that the stress caused by the clash of these expectations can be enormous. In effect, women physicians ask themselves: "Can I be a feminine woman and a good doctor?" They also might ask: "How can I encourage changes in traditional thinking about what it means to be a physician to include more 'feminine' styles, such as more personal involvement with patients, less hierarchical decision-making, and so on?" Some observers contend that female mentors are crucial to women physicians who are coping with the difficult task of integrating their expectations and goals. Ducker concludes that women's and men's ways of relating are learned behaviors and, as such, can be learned and unlearned. Women may choose to use male-dominated networks and enter into traditional mentor-protégée relationships, or they can explore other options, including relying on women peers rather than on older models and mentors for guidance. They also may include alternatives, such as long-distance mentoring, where mentors and protégées do not work in the same place but could communicate by telephone and mail and meet at conferences.[84]

Conclusion

Medical schools have made enviable progress in attracting and retaining women students. Partly in response to declining enrollments and a desire to maintain academic standards—but also in response to the recognition that inequities exist in medical school admissions—administrators have designed outreach efforts to attract women and minority students. Many schools have developed support networks and other programs and policies to address the needs of their women students.

There is work still to be done, however. Women, while entering the study of medicine in record numbers, are not advancing as rapidly in academic medicine careers as are their male counterparts. It is critical that women be available as faculty members and administrators to mentor and provide role models for both female and male medical students.

Clearly, medicine will be the career of choice for many women, now and in the future. Women will play an ever-larger role in providing health care in the U.S. and will have an opportunity to make a significant impact on the quality of that medical care.

Medical schools are in a unique position to help their students prepare for rapid changes in the practice of medicine. Anticipating these changes and providing an equitable and humane environment in which students can study and in which they can learn to relate to each other are the challenges facing medical schools in the twenty-first century. Evaluating and altering policies, structures, and actions to improve the medical school environment cannot be seen as "women's work." The awareness and support of all members of the medical community are crucial and, indeed, will be to their advantage, for efforts to humanize the institution will benefit women and men alike.

Recommendations

The following are specific recommendations to encourage women to attend medical school and to ensure that an equitable learning environment exists for all students. Many of these program and policy ideas have been implemented successfully at different medical schools. They are aimed at a variety of people—deans, other administrators, faculty members, counselors, admissions and financial aid officers—and many of the recommendations will be appropriate for more than one group. The recommendations will not be suitable for all situations at all institutions; they are intended to be catalysts for ideas. A broad comprehensive approach is more likely to yield results than a few ideas implemented in a piecemeal fashion.

Recommendation 1: Develop outreach strategies at local schools and in the community to encourage young women as well as nontraditional populations such as minority women, rural women, and older women to consider medicine as a career.

- Consider sponsoring programs for junior high as well as high school girls who are preparing for college. These programs must take place early enough to have an impact on the courses selected by girls in high school.
- Consider community outreach programs in addition to academic ones. The Women in Medicine program at the University of Tennessee–Memphis works with twenty girls from the Girls' Club in one of the poorest neighborhoods in Memphis. The program, named Journey, is very popular with the twelve-year-old girls as well as the medical students. Among the topics addressed in the weekly visits are career planning, family planning, child sexual abuse, the reproductive system, decision making, and exercise and nutrition.
- Encourage women faculty members, residents, and students to visit high schools as speakers or at "career day" functions. This not only provides girls with role models but also shows boys that women can be physicians. These activities should be recognized and valued in tenure decisions as community service.
- Sponsor a program for women faculty members and students to serve as "big sisters" in medicine and the basic sciences. The Omicron Chapter of Graduate Women in Science sponsors a "Big Sister in Science" program with professional women serving as career and educational mentors.
- Sponsor a day on campus for high school guidance counselors, career counselors, and math and science teachers to show them the opportunities that exist for women students at your school.
- Invite college students and high school students to campus for a day of medical career awareness activities. Include panel discussions on such topics as a typical day at work, balancing professional and family life, opportunities in various specialties for women, and academic preparations that students can make while in college.
- Develop programs to encourage women faculty members, residents, and students to contact pre-med advisors and to meet with pre-med students and talk about women in medicine or serve as contacts for externships. The American Medical Women's Association publishes a booklet for pre-med students, *Medicine: A Woman's Career* (see the resource list for more information). AMWA also can help provide pre-med advisors or students with lists of women physicians willing to be resource people to women pre-medical students. Contact Eileen McGrath, Director of AMWA (see the list of organizations for address).
- Sponsor a variety of summer outreach programs designed to attract women college students to medicine. The Robert Wood Johnson Foundation has funded a summer enrichment program for minority students in medicine that serves as an excellent model for these activities. (See "Minority Medical Education Program" in the model program section for more information.)
- Publicize summer program activities widely. This helps to increase interest and awareness among all students and community members, not just the ones who attend the program.
- Develop outreach programs for women in rural areas, especially in the South and North Central regions of the U.S. Medical schools in these areas have proportionately fewer women applicants and students than those in the West and Northeast. One reason for the lower enrollment may be that women in these areas are more likely to opt for traditionally female careers and would be well served by increased recruitment efforts.[85]
- Encourage and support women in two-year community colleges to consider entering medical school. A large percentage of women, especially minority women, enter postsecondary education via two-year colleges in vocational and technical programs. They may be interested in a medical career but feel that it is out of reach.
- Ensure that outreach programs for high school students include female minority and economically disadvantaged students from local and regional public high schools. Offer free tuition to summer and other types of programs, and offer guidance on how to apply to college, what courses to take, and how to get financial aid. Stanford University offers a free summer program for minority high school students to encourage them to pursue health careers. The program uses a combination of classroom, clinical, and residential activities to expose students to different areas of medicine and familiarize them with the training required to be a doctor. Program

administrators work closely with the Office of Community and Patient Relations at Stanford University Hospital. The teachers are faculty and community physicians, medical students, local health professionals, and financial aid and admissions officers. For more information on the program, contact Sharon Beckham at 415/723-7424.

■ Extend opportunities for study to women in the community, especially women who have been out of the workforce, women who hold degrees in nonscience fields, and women in health-related fields.

Recommendation 2: Through policies and programs implemented institution-wide, ensure that the school's commitment to gender equity is seen as a matter of utmost concern.

■ Issue a policy statement that emphasizes the importance of an equitable gender climate. Distribute the statement to all members of the medical school community; publish it in the faculty bulletin, handbook, and all materials distributed to new students and employees at all levels.

■ Appoint a high-level administrator to evaluate and improve the climate for all students and to help coordinate services. Incorporating responsibility for gender issues into a particular person's job responsibilities is also an option. The University of Louisville School of Medicine has created the position of Associate Dean for Faculty and Student Advocacy (the only one of its kind in the U.S.) to deal with personal and professional issues for men and women at all levels. If an ombudsperson's office exists at the medical school, ensure that its staff is able to handle gender-related issues and is aware of policies and procedures to respond to them.

■ Most U.S. medical schools have appointed a Women's Liaison Officer (WLO) to the American Association of Medical Colleges (AAMC). (See "AAMC's Office for Women in Medicine" in the model program section for more information.) Ensure that the WLO is included in long-range planning. Allocate funds to support women-in-medicine activities that may be initiated by WLOs.

■ Issue a policy statement that makes clear that overtly biased comments, use of sexist humor, and related behavior on the part of faculty members are not appropriate in the classroom or in related learning situations. Distribute the statement to faculty members and students and publish it periodically in the student newspaper and the faculty bulletin. Ensure that new arrivals to the school—faculty members and students—are made aware of the policy. Rush University and its College of Medicine have implemented policies and procedures on harassment—including harassment related to race and religion—that may be useful models. University of Iowa's policy on sexual harrassment and consensual relationships is also a useful model.

■ Develop and publicize a policy and procedure whereby students and faculty members can air complaints of harassment and other biased treatment.

■ Adopt a nonsexist, inclusive language policy to cover all written and verbal institutional communications. Examine textbooks and curricular materials for gender bias. The Ontario Medical Association's Committee on Women's Health Issues has produced guidelines for speakers on communicating without bias; it is reprinted in the September 1989 issue of *Ontario Medical Review*.

■ Incorporate gender climate issues, including sexual harassment issues, into faculty development programs and training of senior residents who supervise students. Ensure that all residents and faculty members are aware of the legal prohibitions concerning sexual harassment.

Recommendation 3: Collect statistical data on faculty members and students. This is a critical factor in assessing an institution's progress towards sex equity.

■ Because the presence of women and minority faculty members has a positive impact on the retention and satisfaction of women and minority students in medicine, the Office for Women in Medicine at Yale University issues annual reports on full-time faculty members in the School of Medicine, including data on sex, degree, percentage of women and men at each level, salary, age, and years at rank. (See "Yale University's Office for Women in Medicine" in the model program section for more information.)

■ Collect, analyze, and report participation data for students by year of study, course, and sex in order to document inequities. Monitor students' progress to identify early those students at risk of leaving and determine if the reasons are different for women and men students. This also will help identify those students in need of extra encouragement.

■ Collect data on shifts in choice of specialty to determine if particular departments seem to be discouraging women or if there are other factors involved.

Recommendation 4: Ensure that all recruiting and admissions personnel, as well as alumni interviewers, are committed to women's participation in medical school and a gender-fair environment.

■ Provide medical school admissions and residency placement interviewers with guidelines for conducting effective, unbiased interviews. The following institutions have been identified by the AAMC's Women in Medicine Coordinating Committee as having developed useful applicant interview guidelines:

- Mayo Clinic, 200 First St., SW, Rochester, MN 55905; 507/284-2511 (contact Jane Campion, Affirmative Action)
- State University of New York–Syracuse, 155 Elizabeth

Blackwell St., Syracuse, NY 13210; 315/473-4816 (contact Geno Andreatta, Dean of Admissions and Student Affairs)

■ University of Pittsburgh School of Medicine, M-245 Scaife Hall, Pittsburgh, PA 15261; 412/648-9891 (contact Barbara Levey, M.D., Director of Admissions).

Also very helpful in examining gender-based questions is a booklet developed by the American Medical Association's Women in Medicine Project, *The Residency Interview: A Guide for Medical Students*. See the resources section of this paper.

■ Periodically evaluate interviewers' behavior by surveying prospective students about their interviewing and admissions experiences. Provide specific guidance to interviewers about questions that may be illegal to ask as well as others that are gender biased.

Recommendation 5: Develop a continuing process to evaluate the institution's media—including the catalogue, flyers, brochures, and posters—to ensure that women are portrayed as being involved at all levels of the institution and across all fields.

■ Assemble and distribute literature packets to women students, prospective students, and pre-medical advisors. Include biographical sketches of women in medicine, information on courses and requirements, and information on services, policies, and programs available to women students.

■ Develop mailings and materials aimed at prospective women students. For instance, a woman expressing interest in radiology could receive not only informational brochures on your school and its programs but also a letter from a woman faculty member in radiology.

■ Develop publicity materials—such as brochures, flyers, and posters—that highlight women in medicine to encourage women to seek information about your school. Distribute these materials to pre-medical advisors as well as to counselors at community colleges and high schools. Make sure that all publicity materials portray women in a variety of non-stereotypical settings.

■ Feature women in campus publications. For example, profile women faculty members and students in the alumni magazine. Not only will such articles increase the recognition of individual women's activities at your school, but reprints can be sent to prospective students.

■ Use news releases to highlight women's achievements and activities. These also can be reprinted and used for recruitment purposes.

■ Publish a newsletter for and about women in the institution or in various departments. The following medical schools have newsletters devoted to women's interests: University of California–Los Angeles, Case Western Reserve University, Yale University, Ohio State University, Harvard University.

■ Document, publish, and circulate proceedings and materials from conferences, workshops, and model programs and policies dealing with women in medicine so that other schools can replicate and adapt your experience.

■ The medical school library should subscribe to and keep on file the *Journal of the American Medical Women's Association*. Also helpful are AMWA's publications, among them *Careers in Medicine, Volumes 1 and 2*.

■ Materials not generated by the medical school—magazine and journal articles on the status of women in medicine—can be used in recruitment packets and distributed on campus to keep faculty members and students informed.

■ Develop videotapes or slide shows to use in outreach, informational, and awareness-raising activities. The American Academy of Family Physicians' Committee on Women in Family Medicine has developed and videotaped vignettes and a discussion leader's guide, *Personal and Professional Problems Experienced by Women in All Phases of their Medical Careers*. For more information, contact the AAFP at 800/274-2237.

Recommendation 6: Ensure that all women students have access to advising and mentoring from both faculty members and other students. First-year women and women in male-dominated specialties may need extra attention and support both academically and personally.

■ Develop programs to involve residents and students in their clinical years to help first-year students develop self-confidence, clarify their career goals, interact more effectively with faculty members and peers, and deal with the pressures of being in a predominantly male environment. Students further along in their career path may find some benefits from this arrangement, too; they may feel less isolated and helping others may boost their morale.

■ Offer programs that address specific problems minority women may face in academic and career development. Identify minority women physicians in or outside of academe to serve as models/mentors for women students.

■ Schedule group meetings with women students and faculty members to discuss academic and career goals and personal issues. The Association of Women Medical Faculty at Brown University Program in Medicine includes in its activities a mentoring program for women medical students and efforts to strengthen links with women residents at Brown-affiliated hospitals. The Northeastern Ohio Universities College of Medicine's (NEOUCOM) Women in Medicine Program holds a brown-bag lunch series for students (lunch programs may be most accommodating to students' demanding schedules). Another ongoing program there is a women-in-medicine reading group; the readings have included journal articles, poems, essays, and policy statements. Topics have included sexual harassment, the maternal "instinct," women's career patterns in medicine, substance addiction, and gender differences in

the patient-physician relationship. The director of medical affairs, the dean of legal affairs, alumni, and students have been discussion leaders.

■ Consider offering a seminar on women in medicine for first-year students. The course would give students a chance to know one another, faculty members could speak of their own professional interests and career routes, and physicians from outside academe could describe their career choices and activities. Reading assignments and discussions could focus on questions such as: What is the experience of women in science? How does science look at women? Are there limitations in this view? If more women were scientists, would the form and content of science be different?

■ Arrange for a group of faculty members to serve as informal counselors for women students. The AAMC women's liaison officer at Indiana University School of Medicine, Kathleen A. Warfel, wrote to the students and encouraged them to contact faculty members (from a list she compiled) regardless of what their questions or concerns might be.

■ Arrange for informal regular meetings between women at all levels. Monthly potluck suppers for students, faculty members, and others are held at the homes of women faculty members of the Uniformed Services University of the Health Sciences in Bethesda, Maryland. Practicing women physicians are also invited to share their experiences in their particular fields and the ways in which professional responsibilities have affected their personal lives. As a result, some students have set up appointments with women physicians in order to observe them at their daily tasks.

■ Ensure that medical school faculty members and administrators who counsel students regarding specialty choice are aware of stereotypes about "appropriate" specialties for men and women. Encourage advisors to explore these gender stereotypes with their students to help students determine their career interests.

■ Institute exit interviews for women who are dropping out to determine if an inhospitable gender climate has been a significant contributing factor in the decision.

■ Encourage and support AMWA's student branches with luncheon meetings and invite practicing women M.D.s to speak, especially those from fields in which women have not traditionally specialized, for example, ophthamology, surgery.

■ Hold workshops for students to help them prepare for the challenges of working in a clinical setting, dealing with patients, and so on. Issues such as gauging the supportiveness of faculty members and senior residents, handling differential treatment, and confronting self-doubt could be discussed.

Recommendation 7: Hold workshops or discussions with faculty members or others who advise and teach women. Discuss the effects of an inhospitable climate, the importance of role models and mentors, and the availability of campus programs for students.

■ Help faculty members identify sex-typed expectations regarding fields of study, cocurricular activities, and careers; to understand not only overt discouragement ("That field is too difficult for a woman"), but also more subtle behaviors such as withholding approval or expressing doubts that are unwarranted by the student's record.

■ Encourage faculty members to make an effort to gain an understanding of the differential treatment that women and minority students may encounter.

■ Provide women with informal as well as formal feedback on the quality of their work. Women often get less feedback–positive or negative.

Recommendation 8: Hold meetings geared to male students to discuss their attitudes toward women as colleagues, superiors, and patients. These often can be conducted best by male faculty and staff members.

Recommendation 9: Ensure that improving the climate for minority women is a priority among administrators and policy-makers.

■ Conduct a study to determine the perceptions and experiences of minority students. The University of Massachusetts Medical Center has done this and also is interviewing faculty members, admissions committee members, and deans on their perceptions regarding minority students. The former assistant dean of students and director of minority affairs, Raquel Bauman, is conducting the study. For more information, contact her at 617/956-6534.

■ Encourage women and members of minority groups to apply for scholarships, grants, and loan programs for which they are eligible. Collect and review annual data on financial aid to evaluate whether women are receiving their fair share of resources.

■ Seek out and post information on awards, grants, and loan programs offered by the school or outside organizations for women and minority students.

■ Develop procedures to remind and encourage faculty members and administrators to nominate women for prizes and awards so that women are not inadvertently overlooked.[86]

Recommendation 10: Encourage women students to meet each other and get involved in support groups, both within the medical school and in larger professional circles, to help them cope with academic, social, family, and career pressures.

■ Ensure that departments have access to information from

women's professional and education groups and that women students are aware of the services and support these organizations offer. (Several of these are listed in the resources section of this paper.)

■ Inform first-year and all new students about school-sponsored and other resources such as the ombudsperson's office, support groups, spousal programs, and so on. Listing these in orientation materials is helpful, as is discussing them during orientation meetings.

■ Compile a directory of local women in various medical specialties in academe and in private practice who are willing to participate in campus activities and work with students and residents. Compile a similar list of women at the institution. The University of Louisville School of Medicine publishes an annual directory of women faculty members that includes contact addresses and phone numbers as well as information on the individual's research interests.

■ Hold regular roundtable discussions and/or brown-bag lunches to discuss career opportunities and issues of concern to women in medicine.

■ Keep current information on campus and national organizations concerning women in medicine posted in a central location, for example, outside the student affairs or student advocacy offices or in the library. Include professional associations, student groups, and campus clubs.

■ Encourage women to join professional organizations in their specialties. Encourage the organization of support groups made up of women students with similar career interests.

■ Encourage student-parents to form and join support groups. At the University of Michigan School of Medicine, Linda Dominguez, now a junior, started Medical Moms in 1987. Topics for discussion include day care, loan assistance for day care, the dynamics of specialty choice versus time available for family life, and residency and parenthood. A similar group exists at Michigan State University, where child-care options and medical class schedules have been major topics of discussion. Michigan State offers an extended program in which the first two years of medical school are spread over three years.

Recommendation 11: Provide support services for students to help them cope with stresses they may experience in medical school.

■ Fund a resource center to coordinate support services for women in medicine, such as academic and personal counseling, scholarships, career planning, seminars and conferences, courses, and newsletters. (See the model program section.) If a separate office is not feasible, allocate space at the library or in a specific department. Ensure that all faculty and staff members are aware of this office and of the services available to women in medicine.

■ Evaluate the institution's need for comprehensive child-care services. The University of California–San Francisco School of Medicine, with the assistance of the International Child Resource Center in Berkeley, California, distributed a survey to fifteen thousand students, nurses, faculty members, and staff members. More than half of the 1,606 respondents to the extensive questionnaire indicated that they had experienced problems with the following child care-related issues: cost of care, care for sick children, and matching care and work schedules.[87]

■ Even if on-site child care is available, investigate other options in the community and ways in which your medical school could participate. In 1987, the Medical College of Hampton Roads paid a membership fee to an organization that entitles employees and students to free access or reduced fees for counseling about child-care options, a computerized and individualized referral service, placement in approved homes, and seminars on related topics.

■ Offer support to men and women who wish to combine careers in medicine with parenthood and family commitments. Harvard Medical School has an Office of Parenting that has developed guidelines for residency and other programs that may need to change in order to accommodate a pregnancy. It also advocates the option of a flexible rotation in each year to provide back-up for situations–accidents, illnesses, and family deaths, for example–requiring additional coverage.

■ Bring together students and men and women physicians who have successfully combined families and professions in various ways.

■ Yale School of Medicine's Office for Women in Medicine has established a mentor program to help the spouses of residents (both male and female). The program pairs the spouses of faculty members with the spouses of new residents entering the hospital. The mentors introduce the spouses to the New Haven area and give tips on how to manage conflicting career goals and balance family responsibilities. (See "Yale University's Office for Women in Medicine" in the model program section for more information.)

■ Offer video sections of lecture courses. Videotaped lectures allow students to view lectures any time and can be especially helpful to students balancing family life and school.

■ Ensure that complaint procedures can accommodate subtle differential treatment as well as overt discrimination. Establish a confidential procedure that includes designating a specific person with whom concerns can be discussed and who can provide informal feedback and assistance to those whose behavior is unprofessional. The procedure should have both formal and informal components.[88]

Recommendation 12: Ensure that women students feel that they are involved in the ongoing activities of the school and that women believe their concerns and opinions are being heard.

■ Include gender climate issues in student evaluations of professors. Questions may involve the following: Does the professor call on women and men students equally? treat men's and women's comments with the same degree of seriousness? make sexist comments or use sexist humor? make a special effort to treat women and men equally (for example, by avoiding sexist language or using sex-fair class examples)?

■ Develop a survey for women and men students to evaluate the gender climate in the institution and to determine if women find the climate less congenial than men do. The University of South Carolina School of Medicine is developing two surveys, one for use by students and one by faculty members.

■ Encourage joint projects and research between women students and faculty members outside regular classroom and laboratory assignments.

■ Encourage women students to take an active part in recruiting activities, such as visiting high schools, serving on committees, preparing written materials, hosting visiting students, and writing to prospective students.

■ Offer women students the opportunity to mentor and tutor younger students.

Recommendation 13: In addition to encouraging women physicians on campus to serve as role models for women students, make an effort to develop contacts among students and women physicians who are in private practice or engaged in research.

■ Bring leading women physicians to campus to speak and to present their research. Publicize these events widely. The American Medical Women's Association has a speakers' bureau that can help locate appropriate presenters. Ensure that minority women physicians are invited also.

■ Bring in recent graduates and women in the early stages of their careers to speak with students. In this way, women students can relate to "ordinary" people in medicine as well as the stars. In the Women in Medicine Program at the Northeastern Ohio Universities College of Medicine (NEOUCOM), a "What They Don't Teach You at NEOUCOM" panel is held for pre-clinical students by senior medical students.

■ When women physicians are invited as guest lecturers, have them meet with students to discuss the gender climate issues the physicians may have faced and how they approached them. Women students can benefit from learning how successful women cope in practice or in academic medicine, balance career and family, and deal with other problems.

■ Develop a network of female minority alumni, faculty members, staff members, and others outside medical school who are interested in advising or participating in minority students' activities.

Recommendation 14: Ensure that women are hired and promoted in academic medicine by developing and monitoring specific recruitment and promotion procedures. Increasing the presence of women and minority faculty members in all specialties will not only bring new perspectives and encourage diversity but also will provide a variety of role models for all students.

■ Develop and/or review procedures to recruit women and minority faculty members more effectively. In 1988 Yale University's president appointed a Minority Faculty Issues Committee which recommended short- and long-term strategies for developing a fuller minority presence within the pipeline. Yale's Affirmative Action Office and the School of Medicine's Office for Women in Medicine have published a handbook, *Faculty Recruitment and Appointment Guide with Emphasis on Increasing the Representation of Women and Minority Group Members*. The handbook is designed to assist department chairs and faculty search committees in recruiting and selecting new faculty members. It describes the role of affirmative action during these processes and offers suggestions on attracting women and minority faculty. The University of California funds a President's Fellowship Program, which awards more than half a million dollars in fellowships to women and minority postdoctoral students who hope to become university faculty members. Applicants from fields nontraditional for women and minorities are given preference.

■ Hold workshops and seminars on careers in academic medicine in conjunction with career options workshops for students and residents.

■ Publicize job openings at your school through resources aimed at women. The Association of Women Medical Faculty at Brown University sends monthly or bimonthly announcements to members. If you have an important vacancy such as chairperson and wish to obtain a set of AAMC Women Liaison Officer mailing labels for the purpose of publicizing the vacancy, contact Janet Bickel at AAMC (the address is listed in the resources section of this paper).

■ Sponsor welcoming meetings to introduce new medical school faculty members to programs, policies, and decision-makers. The University of Texas–Galveston has monthly luncheon meetings for faculty members in their first year.

■ Provide written information about academic procedures and obtaining tenure. The University of Southern California Medical Faculty Women's Group publishes a *Survival Manual for New Faculty*. It is now distributed to men as well as women and includes advice about maintaining one's own personnel file, networking, and locating resources in addition to describ-

ing committees, types of faculty appointments, salaries, and evaluation procedures.

■ Hold annual workshops on career development, academic advancement, research projects, and writing grant applications. A recent meeting of this kind was sponsored by Brown University Program in Medicine and was open to all medical and biology faculty members.

■ Institute a task force on women faculty members to advise the dean on the status of women faculty members, to improve procedures for hiring and promotion, and to make recommendations for improvement in services and the professional climate. The Yale School of Medicine's task force on women issued a report in October 1988. Among its recommendations were:

- Establish a career counseling program for junior faculty members and medical and graduate students to provide a forum to discuss the appointment and promotion process. This will help junior faculty members to understand better the issues and requirements involved in promotion.
- Have the school's planning and priorities committee monitor and advise departmental chairs and the dean about the process of acquiring tenured faculty positions for women.
- Provide increased information and assistance concerning employment opportunities for spouses of new faculty members.
- Encourage the establishment of a school policy on child-care leave that allows for "stopping" or "slowing" the tenure clock. Chairs and section heads should not confuse gaps in the activity of an individual who is raising a family with a lack of ability or interest. New strategies need to be developed for accommodating faculty members with family responsibilities, for example, creating full-time positions to be shared by two faculty members.

■ Women's offices and groups should urge new women faculty members to think about their goals and about where they are in rank and salary relative to others at their institution and at other institutions. Programs and assistance could be offered to women who are negotiating for salaries and support (research time, space, and so on).

■ Encourage junior women faculty members to attend professional development meetings and workshops. The Women in Medicine Program of AAMC sponsors an annual professional development seminar for junior women faculty members. The seminar is designed to assist each participant in identifying her professional goals and creating an agenda to meet them. It provides useful information on and insights into the realities of advancement in academic medicine and helps attendees develop leadership skills and opportunities.

■ One way to increase the number of minority medical faculty members is to increase the numbers of minority graduates with medical degrees. The American Medical Association (AMA) works with AAMC to develop recruitment materials, videos, and brochures to attract students. These recruitment materials are targeted to groups such as the Association of Advisors for Health Professions, medical schools, state medical societies, practicing physicians, and students. The Society for Black Academic Surgeons (SBAS) holds annual conferences; participants at the 1989 conference discussed future career plans for young Black assistant professors. The SBAS also is establishing a fund for scholarship to be awarded annually to two Black M.D.s pursuing careers in academic medicine. The goal is to support recipients during the first few years after graduation, when most choose private practice over academic careers for economic reasons.

Model Programs

Yale University's Office for Women in Medicine

In 1975, the Office for Women in Medicine (OWM) at Yale University School of Medicine was founded to advance the careers of women in medicine and the medical sciences. The office provides a supportive environment for women physicians, scientists, and students by fostering and promoting activities, strategies, and policies favorable to women in medicine and demonstrating the contributions women make and always have made to the medical and scientific professions.

Programs offered by OWM include an annual lecture series that increases the visibility of women in medicine, provides the medical community access to notable speakers, and creates a forum to discuss relevant issues to women. Recent topics have included "Health Hazards for Women," "Conflictual Issues in the Research Lab," "Attitudes in Treating Lesbian and Gay Patients," "Dual-Career Marriages," and "Minority Women in Today's Medical System." Informal lunches bring together women students and faculty members to exchange ideas, view common problems from differing viewpoints, and gain perspectives on role models.

Regional conferences and workshops, including "Women Meeting Women in Medicine," are organized to provide opportunities for women physicians of diverse backgrounds and disciplines to meet with women medical students at Yale. The Prospective Student Program matches women students at the Yale School of Medicine with women applicants and provides an opportunity for prospective students to discuss life as a student at Yale. In addition, this program enables female applicants to meet informally and to stay overnight with Yale medical students when they visit for interviews.

The Committee on the Status of Women works closely with OWM and advises the dean on issues regarding the status of women in the school. Students are encouraged to participate on this committee. The committee prepares an annual report on the number of faculty members by rank and gender in the School of Medicine.

The Leah Lowenstein Award, named after the first woman dean of an American coeducational medical college, is presented at graduation to the School of Medicine faculty member whom the students believe most clearly provides a positive image of women in promoting humane and egalitarian medical education.

Services and publications of Yale University's Office for Women in Medicine include a counseling and referral service that affords students, house staff, and faculty members the opportunity to share on a confidential basis their concerns, frustrations, and accomplishments; a newsletter entitled *Women in Medicine*; a resource library; and support groups. Procedures to deal with sexual harassment, hear grievances, and take appropriate action have been established at the School of Medicine. The OWM encourages men and women to report incidents of sexual harassment and other inappropriate behavior, to discuss complaints, and to use grievance procedures to file complaints when they believe they have been treated unfairly or in an offensive manner.

For more information, contact Merle Waxman, Director, OWM, Yale University School of Medicine, 333 Cedar St., New Haven, CT 06510.

Minority Medical Education Program

The nation's need for well-trained minority physicians is as great as ever. In the past fifteen years, however, enrollments of Black, Hispanic, American Indian, and Native Alaskan students in U.S. medical schools have stagnated. These groups combined now constitute only 9 percent of the students entering medical school.

The low participation of minority students in medicine has prompted the Robert Wood Johnson Foundation to provide $6 million to fund the Minority Medical Education Program (MMEP). This summer enrichment program is designed to identify students from underrepresented minority groups who have a strong interest in medical careers and strong academic skills. During the summer of 1989 (the first year of the five-year program), 760 students participated at the six university sites that house the program. These institutions and programs also contribute their own funds: Baylor College of Medicine, Texas Medical Center; Case Western Reserve University School of Medicine; United Negro College Fund Premedical Summer Institute at Fisk University; Illinois Institute of Technology; University of Virginia School of Medicine; and University of Washington School of Medicine. Some of the institutions are operating their programs as consortia that include several colleges and universities; many have raised money from local organizations as well.

The programs' directors hope that the benefits of the five-year program will be widespread and long-lasting. Not only will the undergraduate program participants be encouraged to become physicians and possibly become involved in helping their communities, but their presence may serve to guide other minority students into medicine.

Particularly important is the program's laboratory experience, which includes exposure to both clinical and research aspects of medicine in a structured environment with an M.D. or Ph.D. mentor. In addition to the laboratory experience, each of the MMEP sites offers:

- academic enrichment in biological sciences, mathematics, and problem-solving

- practical counseling regarding the selection of and application to medical school
- preparation and review for the Medical College Admissions Test (MCAT)
- long-term follow-up and tracking of program participants
- stipends for travel assistance, if necessary.

Eligible students must be U.S. citizens or permanent residents, must meet certain academic requirements, and must be from one of the following minority groups: Black American, Mexican American, mainland Puerto Rican, or Native American. For more information, contact Minority Medical Education Program, University of Oklahoma Health Sciences Center, Dept. of Medicine, 941 Stanton L. Young Blvd., BSEB Room 302, Oklahoma City, OK 73104; 405/271-5335.

University of California Parental Policies

The University of California campuses have implemented some important policies regarding leave for childbearing and childrearing. The Chancellor's Advisory Committee on the Status of Women worked to bring about the changes for faculty members. The provisions include:

- Leave for childbearing and recovery shall be granted on request, with or without pay, to an academic appointee who bears a child. This leave will normally be for at least six weeks, although more time may be necessary for medical reasons. An academic appointee who accrues sick leave will receive full pay to the extent of her sick leave credit; when sick leave is exhausted she may be eligible for temporary disability under a University of California program. An academic appointee who does not accrue sick leave because of her title and who has served for at least one year will receive full pay for up to six weeks.
- Academic appointees are eligible for parental leave, which should be requested at least three months in advance. Parental leave without pay may be granted for up to one year for the purpose of caring for a child, subject to the approval of the chancellor. "Periods of Active Service-Modified Duties," with pay, shall be granted on request for the period before and immediately following a birth or adoption of a child. A statement describing the modified duties is subject to approval by the chancellor. The total leave time plus "modified duties" time will not generally exceed twelve weeks.
- When an assistant professor has primary responsibility for child care and takes childbearing or parental leave exceeding one quarter but less than one year, that time shall be excluded from service toward the eight-year probationary tenure period unless the faculty member requests that it not be.

In addition to this "clock-stopping" provision, the committee won another controversial point concerning the definition of and eligibility for "full pay" during childbearing leave. Initially the university wanted to pay at base salary only, which represents only about 50 percent of income for physicians. The committee successfully argued that childbearing leave must be paid at the same salary as all other leaves (e.g., sick, sabbatical) for the academic unit.

For more information, contact Diane Wara, M.D., Professor of Pediatrics and Chair, Chancellor's Advisory Committee on the Status of Women, University of California–San Francisco, 513 Parnassus Ave., San Francisco, CA 94943-1410.

AAMC's Office For Women in Medicine

The Association of American Medical Colleges (AAMC) created the position of Women Liaison Officer (WLO) in 1976. Since that time, virtually all U.S. medical schools, half of Canadian medical schools, about one-third of the academic societies, and one-quarter of the teaching hospitals that are members of AAMC have appointed a WLO. Although WLOs have no formal role in AAMC's organizational structure, they form a valuable network, benefiting their own institution or academic society as well as enhancing the association's activities. Typical activities of WLOs at their own institutions include providing continuity to women's student and faculty groups and suggesting and initiating programs; serving as a resource at the school on matters involving academic women's concerns; and promoting recruitment and advancement of women faculty members and administrators.

In support of the WLO's activities, AAMC's Office for Women in Medicine annually publishes a compendium of statistics relating to women in medicine, a directory of women liaison officers, and a quarterly newsletter, *Women in Medicine Update*. Other resources include a handbook, *Building a Stronger Women's Program*, a compendium of sexual harassment policies, information on salary equity studies, and a study of parental leave policies for residents. A women-in-medicine professional development seminar for junior faculty members also is offered annually. An eight-member coordinating committee assists the Office for Women in Medicine staff in planning meetings and developing programs. Through this office, AAMC plans a number of sessions on women in medicine at their annual meeting. Most regional meetings of AAMC's Group on Student Affairs include a session targeted at women's concerns. For more information on the activities of the Office for Women in Medicine, contact Janet Bickel, Director for Women's Programs and Senior Staff Associate, Division of Institutional Planning and Development, AAMC, One Dupont Circle, NW, Suite 200, Washington, DC 20036.

Additional Resources

Publications

Alston, Frances Kemper. *A Survey of Day Care Programs in Teaching Hospitals: A Report of the Task Force on Dependent Care of the American Medical Women's Association.* Alexandria, VA: American Medical Women's Association, 1989.

Altekruse, Joan M. and Suzanne W. McDermott. "Contemporary Concerns of Women in Medicine." *Feminism Within Health Care Professions: Overcoming Resistance*, edited by Sue V. Rosser. New York: Pergamon Press, 1988.

Bernstein, Anne. "Maternity Leave for Housestaff: Moving from Advocacy to Advice," *Journal of American Medical Women's Association* 43 (May–June 1988): 85–88.

Bickel, Janet. "Women in Medical School." *The American Woman 1990-1991: A Status Report*, edited by Sara E. Rix. New York: W. W. Norton & Co., 1990.

Dickstein, Leah J., and Carol C. Nadelson, eds. *Women Physicians in Leadership Roles.* Washington, DC: American Psychiatric Press, 1986.

Ehrhart, Julie Kuhn and Bernice R. Sandler. *Looking For More Than A Few Good Women in Traditionally Male Fields.* Washington, DC: Association of American Colleges, Project on the Status and Education of Women, 1987.

Journal of the American Medical Women's Association. Alexandria, VA: American Medical Women's Association. Bimonthly.

Klass, Perri. "Are Women Better Doctors?" *The New York Times Magazine* (10 April 1988): 32ff.

Knight, James A. *Doctor-to-Be: Coping With the Trials and Triumphs of Medical School.* New York: Appleton-Century-Crofts, 1981.

Levinson, Wendy, et al. "Women in Academic Medicine: Combining Career and Family," *New England Journal of Medicine* 321 (30 November 1989): 1511–17.

Medicine: A Woman's Career. Alexandria, VA: American Medical Women's Association, 1983.

Morantz-Sanchez, Regina. *Sympathy and Science: Women Physicians in American Medicine.* New York: Oxford University Press, 1985.

Nemir, Rosa, ed. *Career Choices for Women in Medicine: Vol. II.* 2d ed. Alexandria, VA: American Medical Women's Association, 1984.

The Residency Interview: A Guide for Medical Students. Chicago: American Medical Association, Women in Medicine, 1987.

Rosser, Sue V. *Teaching Science and Health From a Feminist Perspective: A Practical Guide.* New York: Pergamon Press, 1986.

Sandler, Bernice R. *The Campus Climate Revisited: Chilly For Women Faculty, Administrators, and Graduate Students.* Washington, DC: Association of American Colleges, Project on the Status and Education of Women, 1986.

Shapiro, Eileen C., and Leah M. Lowenstein, eds. *Becoming A Physician: Development of Values and Attitudes in Medicine.* Cambridge, MA: Ballinger Publishing Co., 1979.

Walsh, Mary Roth. *Doctors Wanted, No Women Need Apply: Sexual Barriers in the Medical Profession 1837–75.* New Haven: Yale University Press, 1977.

Organizations

American Medical Women's Association
801 N. Fairfax St.
Suite 400
Alexandria, VA 22314
Contact: Eileen McGrath, Executive Director
703/838-0500

Association for Women in Science
2401 Virginia Ave., NW
Suite 303
Washington, DC 20037
Contact: Torry Dickinson, Executive Director
202/833-1998

Department for Women in Medicine
American Medical Association
535 N. Dearborn St.
Chicago, IL 60610
Contact: Phyllis Kopriza, Director
312/645-4392

National Council on Women in Medicine, Inc.
Cornell University
1300 York Avenue, D-115
New York, NY 10021
Contact: Laura Scarf, Executive Director
212/535-0031

National Women's Health Network
1325 G Street, NW
Washington, DC 20005
Contact: Beverly Baker, Director
202/347-1140

Office for Women in Medicine
Association of American Medical Colleges
One Dupont Circle, NW
Suite 200
Washington, DC 20036
Contact: Janet Bickel, Director
202/828-0575

Notes

1. Janet Bickel, *Women in Medicine Statistics* (Washington, DC: Association of American Medical Colleges, 1989).
2. *Medical School Admission Requirements 1990–91* (Washington, DC: Association of American Medical Colleges, 1989).
3. *Ibid.*
4. Nancy K. Schlossberg and Jane Goodman, "A Woman's Place: Children's Sex Stereotyping of Occupations," *The Vocational Guidance Quarterly* 20 (June 1972): 266–70.
5. D.W. Chambers, "Stereotypic Images of the Scientist: The Draw-A-Scientist Test," *Science Education* 67 (1983): 255–265.
6. J. Parsons, *Self-Perceptions, Task Perceptions and Academic Choice: Origins and Change*, Report to the National Institute of Education (Michigan: NIE, 1980) cited in Linda H. Lewis, "New Technologies, Old Patterns: Changing the Paradigm," *Educational Horizons* 63 (Spring 1985): 130.
7. Sue Berryman and Linda Waite, *Women in Nontraditional Occupations* (Santa Monica, CA: Rand Corporation, 1984).
8. *Ibid.*
9. *American Medical Education: Institutions, Programs, and Issues* (Washington DC: Association of American Medical Colleges, 1989), 14.
10. Questions in a 1982 study by the National Assessment of Educational Progress concerning interest in observing scientific phenomena, using scientific equipment, and working with experimental materials, showed that at age nine, both girls and boys wished to have these opportunities. Responses from thirteen- to seventeen-year-olds indicated, however, that girls' desires to participate in science activities diminished between ages nine and thirteen as did achievement and actual science-related experiences. Jane Butler Kahle and Marsha K. Lakes, "The Myth of Equality in Science Classrooms," *Journal of Research in Science Teaching* 20 (1983): 131–40.
11. Jane Butler Kahle, *The Disadvantaged Majority: Science Education for Women* (Washington, DC: American Educators of Teachers of Science, 1983).
12. *Women and Minorities in Science and Engineering* (Washington, DC: National Science Foundation, 1986), 21–24.
13. Nancy G. Kutner and Donna R. Brogan, "The Decision to Enter Medicine: Motivations, Social Support, and Discouragements for Women," *Psychology of Women Quarterly* 5 (Winter 1980): 341–57.
14. *Sex Bias at the Computer Terminal: How Schools Program Girls* (Washington, DC: Project on Equal Education Rights' Computer Equity Report, 1984).
15. Judith M. Hammond, "Social Support Groups, Women's Programs, and Research on Gender Differences: The Bad Press for Women in Medical Education Literature," *Journal of the American Medical Women's Association* 36 (May 1981): 162–65.
16. Penelope W. Dralle, Diane V. Daum, Diane D. Heim, and Robert C. Elston, "Sex Role Stereotypes in Freshman Medical Students' Perceptions of Self and Physicians," *Journal of the American Medical Women's Association* 42 (May/June 1987): 75–81.
17. Brigitte Maheux, Francine Dufort, Francois Beland, "Professional and Sociopolitical Attitudes of Medical Students: Gender Differences Reconsidered," *Journal of the American Medical Women's Association* 43 (May/June 1988): 73–76.
18. *Ibid.*, 75.
19. Linda Grant, "The Gender Climate of Medical School: Perspectives of Women and Men Students," *Journal of the American Medical Women's Association* 43 (July/August 1988): 176–98.
20. These terms are based on the schema used by Nijole V. Benokraitis and Joe R. Feagin, *Modern Sexism: Blatent, Subtle, and Covert Discrimination* (Englewood Cliffs, N.J.: Prentice-Hall, 1986).
21. Jane Leserman, *Men and Women in Medical School: How They Change and How They Compare* (New York: Praeger, 1981).
22. Grant does note, however, that the wording of the questionnaire may have oriented the students' thinking toward actions of individuals rather than institutional practices.
23. J. Marquat, K. Franco, and B. Carroll, "Gender Differences in Medical Student Interviews," presented at the Association of American Medical Colleges' 1988 conference "Innovations in Medical Education." Reported in *AAMC Women in Medicine Update* 3 (Winter 1989): 3.
24. "Addressing Gender Bias in Interviews," *AAMC Women in Medicine Update* 3 (Winter 1989): 3.
25. *Ibid.*
26. Marijo B. Tamburrino, Kathleen N. Franco, Cynthia L. Evans, and Patricia A. Seidman, "Finances: A Hidden Cost to Women Medical Students," *Journal of the American Medical Women's Association* 40 (September/October 1985): 149–51.
27. Kathryn B. Kris, "Developmental Strains of Women Medical Students," *Journal of the American Medical Women's Association* 40 (September/October 1985): 145–48.
28. *American Medical Education*, 16.
29. *Ibid.*
30. *Ibid.*
31. Marijo Tamburrino et al., "Finances," 150.
32. *Ibid.*
33. Catherine A. Martin, Janie L. Jones, and Martha A. Bird, "Support Systems for Women in Medicine," *Journal of the American Medical Women's Association* 43 (May/June 1988): 77–84.
34. *Ibid.*
35. Kathryn B. Kris, "Developmental Strains of Women Medical Students."
36. *Ibid.*, 147.
37. David A. Spiegel, Robert C. Smolen, and Kathryn A. Hopfensperger, "Interpersonal Stress in Medical Education: Correlates for Men and Women Students," *Journal of the American Medical Women's Association* 42 (January/February 1987): 19–21.
38. Linda Grant, "The Gender Climate of Medical School."
39. Linda Grant, Kathryn B. Ward, Donald R. Brown, and William E. Moore, "Development of Work and Family Commitments: A Study with Women and Men Medical Students," *Journal of Family Issues* 8 (June 1987): 176–98.
40. Linda Grant, "The Gender Climate of Medical School."
41. DeWitt C. Baldwin, Jr., Steven R. Daugherty, David Baron, and Edward Eckenfels, "Student Perceptions of Mistreatment and Harassment During Medical School: A Survey of Ten Schools" (Unpublished manuscript, 1989).
42. *Sexual Harassment Survey*, Commission on Women's Issues, University of Wisconsin–Madison, Center for Health Sciences, 1987.

43. Yolanda T. Moses, *Black Women in Academe: Issues and Strategies*, (Washington, DC: Association of American Colleges Project on the Status and Education of Women, 1989).
44. Chalsa M. Loo and Garry Rolison, "Alienation of Ethnic Minority Students at a Predominantly White University," *Journal of Higher Education* 57 (January/February 1986): 67.
45. *Facts and Figures Report, June 1989* (Washington, DC: Association of American Medical Colleges, 1989).
46. Janet Bickel, "Women in Medical Education: A Status Report," *New England Journal of Medicine* 319 (15 December 1988): 1579–1584.
47. Pauline Titus-Dillon and Davis G. Johnson, "Female Graduates of a Predominantly Black College of Medicine: Their Characteristics and Challenges," *Journal of the American Medical Women's Association* 44 (November/December 1989): 175–82.
48. Vivian Pinn-Wiggins, interviewed in *Black Issues in Higher Education* 6 (9 November 1989): 13.
49. Yolanda T. Moses, *Black Women in Academe*. For a fuller discussion of sexual harassment and its effect on women of color, see Michele A. Paludi and Darlene C. DeFour, "Research on Sexual Harassment in the Academy: Definitions, Findings, Constraints, Responses," *Initiatives* 52 (Fall 1989): 43–49.
50. *Sexual Harassment Survey*.
51. Leah J. Dickstein and Allison Batchelor, "A National Survey of Women Residents and Stress," (Paper presented at the annual meeting of the American Medical Women's Association, Los Angeles, CA, October 1989).
52. DeWitt C. Baldwin, Jr., et al., "Student Perceptions of Mistreatment and Harassment During Medical School."
53. *Ibid.*
54. The University of Iowa and Harvard University, among others, have these policies. Copies of these statements are reprinted in a packet of information on sexual harassment available for $5 from the Project on the Status and Education of Women, Association of American Colleges, 1818 R St., NW, Washington, DC 20009.
55. Judith Lorber, *Women Physicians: Careers, Status and Power* (New York: Tavistock, 1984).
56. Carol Weisman and Martha Teitelbaum, "The Work-Family Role System and Physician Productivity" (Paper presented at the American Sociological Association meeting, New York, September 1986), cited in Linda Grant et al., "Development of Work and Family Commitments," 176–98.
57. Linda Grant, et al., "Development of Work and Family Commitments," 176–98.
58. *Ibid.*, 195.
59. *Ibid.*, 196.
60. Judith Hammond, "Social Support Groups, Women's Programs, and Research on Gender Difference," 162.
61. *Ibid.*
62. Sara Sinal, Patricia Weavil, and Martha G. Camp, "Survey of Women Physicians on Issues Relating to Pregnancy During a Medical Career," *Journal of Medical Education* 63 (July 1988): 531–538; Maureen Sayres et al., "Pregnancy During Residency," *New England Journal of Medicine* 314 (13 February 1986): 418–23.
63. Sara Sinal et al., "Survey of Women Physicians," 531.
64. *Ibid.*
65. *Maternity Leave for Residents* (Chicago: American Medical Association, 1984), 1–21.
66. Janet Bickel, "Maternity Leave Policies for Residents: An Overview of Issues and Problems," *Academic Medicine* 64 (September 1989): 498–501.
67. *Ibid.*
68. Leah Dickstein and Allison Batchelor, "A National Survey of Women Residents and Stress."
69. Roselyn Payne Epps and Anne E. Bernstein, "Day Care Programs Affiliated with Teaching Hospitals: Report of the Dependent Care Task Force," *Journal of the American Medical Women's Association* 45 (January/February 1990): 20–22. The complete report, *A Survey of Day Care Programs in Teaching Hospitals: A Report of the Task Force on Dependent Care of the American Medical Women's Association*, is available from AMWA. See the resource list for more information.
70. Janet Bickel, "Women in Medical Education," 1582.
71. *Ibid.*
72. *AAMC Directory of American Medical Education 1988–89* (Washington, DC: Association of American Medical Colleges), cited in Janet Bickel, *Women in Medicine Statistics*.
73. Janet Bickel, "Women in Medical Education," 1582.
74. *Ibid.*
75. Mary Jane England, "Leadership for Women: Medical Academia," *Journal of the American Medical Women's Association* 42 (January/February 1987): 4.
76. Janet Bickel, "Women in Medical Education."
77. *Ibid.*, 1583.
78. For more information on this study, contact Marsha V. Boyles, President, Educational Consultant Services, 18 E. Cliff St., Alexandria, VA 22301.
79. Judith Lorber, *Women Physicians*.
80. See Richard L. Ochberg, Gail M. Barton, and Alan N. West, "Women Physicians and Their Mentors," *Journal of the American Medical Women's Association* 44 (July/August 1989): 123–26; Dalia G. Ducker, "The Professional Context for Women Physicians: Collegial Relations, Role Models, and Mentors," *Journal of the American Medical Women's Association* 43 (July/August 1988): 106–08; and Marjorie S. Sirridge, "The Mentor System in Medicine–How It Works for Women," *Journal of the American Medical Women's Association* 40 (March/April 1985): 51–52.
81. Richard Ochberg et al., "Women Physicians and Their Mentors," 125.
82. Dalia Ducker, "The Professional Context for Women Physicians."
83. Carlotta M. Rinke, "The Professional Identities of Women Physicians," *Journal of the American Medical Association* 245 (19 June 1981): 2419–20.
84. Leah J. Dickstein, M.D., interview with author, 22 March 1989.
85. Steven J. Jacobsen and Alfred A. Rimm, "Regional Differences in the Proportion of Women Among First-Year Medical Students in the United States," *Journal of Medical Education* 61 (November 1986): 911–13.
86. See Roberta M. Hall, *Women Winners* (Washington, DC: Association of American Colleges Project on the Status and Education of Women, 1982) for a variety of recommendations on how to do this.
87. For more information, contact Diane Wara, M.D., Professor of

Pediatrics, University of California–San Francisco, 513 Parnassus Ave., San Francisco, CA 94143-1410.

88. Two articles that describe the organization of an ombudsperson's office and the kinds of issues it can effectively handle based on a model of Stanford University Medical Center's Ombudsman's Office (the first in the country serving an academic medical center) are: Merle Waxman, "A Nonlitigational Approach to Conflict Resolution: The Medical Center as a Model," *The Arbitration Journal* 42 (March 1987): 25–34; and Merle Waxman, Kenneth L. Vosti, and Allen B. Barbour, "Role of the Ombudsman in the Modern Medical Center," *Western Journal of Medicine* 144 (May 1986): 627–30.

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